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Sequence Listing was accepted.

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217-9197 (toll free).

Reviewer: markspencer

Timestamp: Mon Oct 15 13:16:29 EDT 2007

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Application No: 10588734

Version No: 1.0

Input Set:

Output Set:

Started: 2007-09-25 16:27:36.540

Finished: 2007-09-25 16:27:38.117

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 577 ms

Total Warnings: 40

Total Errors: 0

No. of SeqIDs Defined: 40

Actual SeqID Count: 40

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

Input Set:

Output Set:

Started: 2007-09-25 16:27:36.540
Finished: 2007-09-25 16:27:38.117
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 577 ms
Total Warnings: 40
Total Errors: 0
No. of SeqIDs Defined: 40
Actual SeqID Count: 40

Error code

Error Description

This error has occurred more than 20 times, will not be displayed

SEQUENCE LISTING

<110> KUFER, PETER
 LENKKERI-SCHUTZ, ULLA
 LUTTERBUSE, RALF
 KOHLEISEN, BIRGIT

<120> LESS IMMUNOGENIC BINDING MOLECULES

<130> 028622-0155

<140> 10588734

<141> 2007-09-25

<150> PCT/EP05/001573

<151> 2005-02-16

<150> EP 04003445.6

<151> 2004-02-16

<160> 40

<170> PatentIn version 3.3

<210> 1

<211> 318

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 OKT3 light chain

<400> 1

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atcacttgca gtgcaagttc aagcgtaagc tacatgaatt ggtatcagca gacaccaggg	120
aaagccccta agagatggat ctatgacaca tccaaattgg cttctggggt cccatcaagg	180
ttcagtgga gtggatctgg gacagattac actttcacca tcagcagtct gcaacctgaa	240
gatattgcaa cttactactg tcaacagtgg agtagtaacc cttttacttt tggccagggg	300
accaagctgc agatcacc	318

<210> 2

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 OKT3 VL

<400> 2

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
20 25 30

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr
35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
50 55 60

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
65 70 75 80

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr
85 90 95

Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr
100 105

<210> 3

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 3

agagcaagtt caagcgtaag ctacatgaat

30

<210> 4

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 4

Arg Ala Ser Ser Ser Val Ser Tyr Met Asn

1 5 10

<210> 5

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 5

gacacatcca aagtggcttc t

21

<210> 6

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 6

Asp Thr Ser Lys Val Ala Ser

1 5

<210> 7

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 7

caacagtgga gtagtaaccc tctcact

27

<210> 8

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 8

Gln Gln Trp Ser Ser Asn Pro Leu Thr

1 5

<210> 9

<211> 318

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic CD3 VL

<400> 9
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atcacttgca gagcaagttc aagcgtaagc tacatgaatt ggtatcagca gacaccaggg 120
aaagccccta agagatggat ctatgacaca tccaaagtgg cttctggggc cccatcaagg 180
ttcagtgcca gtggatctgg gacagattac actttcacca tcagcagtct gcaacctgaa 240
gatattgcaa cttactactg tcaacagtgg agtagtaacc ctctcacttt tggccagggg 300
accaagctgc agatcacc 318

<210> 10

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
CD3 VL

<400> 10

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met
20 25 30

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr
35 40 45

Asp Thr Ser Lys Val Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
50 55 60

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
65 70 75 80

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr
85 90 95

Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr
100 105

<210> 11

<211> 357

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
CD3 VH

<400> 11

caggtgcagc	tggtgcagtc	tgggggaggc	gtggtccagc	ctgggaggtc	cctgagactc	60
tcctgtaagt	cttctggata	caccttcact	aggtatacga	tgactgggt	ccgccaggct	120
ccagggaagg	ggctggagtg	gattggatac	ataaatccta	gccgtggtta	tactaattat	180
aatcagaagg	tgaaggaccg	attcaccatc	tccagagaca	actccaagaa	cacggccttt	240
ctgcaaatgg	acagcctgag	acccgaggac	acgggtgtgt	atttctgtgc	gagatattat	300
gatgatcatt	actgccttga	ctactggggc	cagggcaccc	cggtcaccgt	ctcctca	357

<210> 12

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
CD3 VH

<400> 12

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg
1				5					10					15	

Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ser	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Tyr
			20					25					30		

Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile
		35					40					45			

Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val
	50					55					60				

Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ala	Phe
65					70					75					80

Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	Tyr	Phe	Cys
					85					90				95	

Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Cys	Leu	Asp	Tyr	Trp	Gly	Gln	Gly
		100						105					110		

Thr	Pro	Val	Thr	Val	Ser	Ser
						115

<210> 13

<211> 729

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

CD3 VH-VL

<400> 13

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caggtgcagc tgggtgcagtc tgggggaggc gtgggtccagc ctgggaggtc cctgagactc      60
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ccagggaagg ggctggagtg gattggatac ataaatccta gccgtggtta tactaattat      180
aatcagaagg tgaaggaccg attcaccatc tccagagaca actccaagaa cacggccttt      240
ctgcaaatgg acagcctgag acccgaggac acgggtgtgt atttctgtgc gagatattat      300
gatgatcatt actgccttga ctattggggc cagggcaccc cggtcaccgt ctcctcagtc      360
gaaggtggaa gtggagggtc tgggtggaagt ggagggttcag gtggagtggg cgacatccag      420
atgacccagt ctccatcctc cctgtctgca tctgtaggag acagagtcac catcacttgc      480
agagcaagtt caagcgtaag ctacatgaat tggatcagc agacaccagg gaaagccct      540
aagagatgga tctatgacac atccaaagtg gcttctgggg tcccatcaag gttcagtggc      600
agtggatctg ggacagatta cactttcacc atcagcagtc tgcaacctga agatattgca      660
acttactact gtcaacagtg gagtagtaac cctctcactt ttggccaggg gaccaagctg      720
cagatcacc                                         729

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<210> 14

<211> 243

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

CD3 VH-VL

<400> 14

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Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1              5              10              15

```

```

Ser Leu Arg Leu Ser Cys Lys Ser Ser Gly Tyr Thr Phe Thr Arg Tyr
              20              25              30

```

```

Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
35              40              45

```

```

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val
50              55              60

```

```

Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Ala Phe
65              70              75              80

```

```

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
85              90              95

```

```

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly
100              105              110

```

```

Thr Pro Val Thr Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly

```

115

120

125

Gly Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Met Thr Gln Ser
130 135 140

Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys
145 150 155 160

Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
165 170 175

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser
180 185 190

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
195 200 205

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
210 215 220

Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Gln Gly Thr Lys Leu
225 230 235 240

Gln Ile Thr

<210> 15

<211> 372

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

CD19 VH

<400> 15

cagggtgcagc tgcagcagtc tggggctgag ctggtgaggc ctgggtcctc agtgaagatt	60
tcttgcaagg cttctggcta tgcattcagt agctactgga tgaactgggt gaagcagagg	120
cctggacagg gtcttgagtg gattggacag atttggcctg gagatggtga tactaactac	180
aatggaaaagt tcaagggtaa agccactctg actgcagacg aatcctccag cacagcctac	240
atgcaactca gcagcctagc atctgaggac tctgcggtct atttctgtgc aagacgggag	300
actacgacgg taggccgtta ttactatgct atggactact ggggccaaagg gaccacggtc	360
accgtctcct cc	372

<210> 16

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
CD19 VH

<400> 16

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ser
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Tyr
20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Gln Ile Trp Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Glu Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Arg Glu Thr Thr Thr Val Gly Arg Tyr Tyr Tyr Ala Met Asp
100 105 110

Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 17

<211> 333

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
CD19 VL

<400> 17

gatatccagc	tgaccacgtc	tccagcttct	ttggtgtgtg	ctctagggea	gagggccacc	60
atctcctgca	aggccagcca	aagtgttgat	tatgatggtg	atagttat	gaactggtac	120
caacagattc	caggacagcc	acccaaactc	ctcatctatg	atgcatccaa	tctagtttct	180
gggatcccac	ccaggttttag	tggcagtggg	tctgggacag	acttcaccct	caacatccat	240
cctgtggaga	aggtggatgc	tgcaacctat	cactgtcagc	aaagtactga	ggatccgtgg	300
acgttcggtg	gagggaccaa	gctcgagatc	aaa			333

<210> 18
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
CD19 VL

<400> 18
Asp Ile Gln Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Gln Arg Ala Thr Ile Ser Cys Lys Ala Ser Gln Ser Val Asp Tyr Asp
20 25 30

Gly Asp Ser Tyr Leu Asn Trp Tyr Gln Gln Ile Pro Gly Gln Pro Pro
35 40 45

Lys Leu Leu Ile Tyr Asp Ala Ser Asn Leu Val Ser Gly Ile Pro Pro
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His
65 70 75 80

Pro Val Glu Lys Val Asp Ala Ala Thr Tyr His Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 19
<211> 1504
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
anti-CD3

<400> 19
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gaactggtac caacagattc caggacagcc acccaaactc ctcattctatg atgcatccaa 180
tctagtttct gggatcccac ccaggtttag tggcagtggtg tctgggacag acttcaccct 240
caacatccat cctgtggaga aggtggatgc tgcaacctat cactgtcagc aaagtactga 300
ggatccgtgg acgttcggtg gagggaccaa gctcgagatc aaagtggtg gtggttctgg 360
cggcggcggc tccggtggtg gtggttctca ggtgcagctg cagcagctctg gggctgagct 420
ggtgaggcct gggtcctcag tgaagatttc ctgcaaggct tctggctatg cattcagtag 480
ctactggatg aactgggtga agcagaggcc tggacagggg cttgagtgga ttggacagat 540

```

ttggcctgga gatggtgata ctaactacaa tggaaagttc aagggtaaag ccactctgac 600
tgcagacgaa tcctccagca cagcctacat gcaactcagc agcctagcat ctgaggactc 660
tgcggtctat ttctgtgcaa gacgggagac tacgacggta ggccgttatt actatgctat 720
ggactactgg ggccaaggga ccacggtcac cgtctcctcc ggaggtggtg gctcccaggt 780
gcagctggtg cagtctgggg gaggcgtggt ccagcctggg aggtccctga gactctcctg 840
taagtcttct ggatacacct tcactaggta tacgatgcac tgggtccgcc aggctccagg 900
gaaggggctg gagtggattg gatacataaa tcctagccgt ggttatacta attataatca 960
gaaggtgaag gaccgattca ccatctccag agacaactcc aagaacacgg cttttctgca 1020
aatggacagc ctgagacccg aggacacggg tgtgtatttc tgtgcgagat attatgatga 1080
tcattactgc cttgactatt ggggccaggg cccccggtc accgtctcct cagtcgaagg 1140
tggaagtgga ggttctggtg gaagtggagg ttcaggtgga gtggacgaca tccagatgac 1200
ccagctctcca tcctccctgt ctgcatctgt aggagacaga gtcaccatca cttgcagagc 1260
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atggatctat gacacatcca aagtggcttc tgggggccca tcaaggttca gtggcagtg 1380
atctgggaca gattacactt tcaccatcag cagtctgcaa cctgaagata ttgcaactta 1440
ctactgtcaa cagtggagta gtaaccctct cacttttggc caggggacca agctgcagat 1500
cacc 1504

```

<210> 20

<211> 498

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
anti-CD3

<400> 20

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Asp Ile Gln Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly
1             5             10             15

```

```

Gln Arg Ala Thr Ile Ser Cys Lys Ala Ser Gln Ser Val Asp Tyr Asp
20             25             30

```

```

Gly Asp Ser Tyr Leu Asn Trp Tyr Gln Gln Ile Pro Gly Gln Pro Pro
35             40             45

```

```

Lys Leu Leu Ile Tyr Asp Ala Ser Asn Leu Val Ser Gly Ile Pro Pro
50             55             60

```

```

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His
65             70             75             80

```

```

Pro Val Glu Lys Val Asp Ala Ala Thr Tyr His Cys Gln Gln Ser Thr
85             90             95

```

```

Glu Asp Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly
100            105            110

```

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val
115 120 125

Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ser Ser Val
130 135 140

Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Tyr Trp Met
145 150 155 160

Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Gln
165 170 175

Ile Trp Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe Lys Gly
180 185 190

Lys Ala Thr Leu Thr Ala Asp Glu Ser Ser Ser Thr Ala Tyr Met Gln
195 200 205

Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys Ala Arg
210